WILL MULTIPLE INTELLIGENCE ACTIVITY BASED TEACHING (MIABT) BE AN ALTERNATIVE MEANS FOR STUDENTS WITH LDs?

By

R. RAVI*   P. XAVIER**

* Assistant Professor, Department of Education, Karunya University, Coimbatore.
** Assistant Professor, Department of Education, Karunya University, Coimbatore.

ABSTRACT

In classrooms, students differ in terms of their academic progress. Most of them achieve high and at the same time some of the students have some learning problems. One of the major reasons for learning problems is learning disabilities. Learning disabilities refers to a variety of disorders that affect the acquisition, retention, understanding, organization or use of verbal and/or non-verbal information. The problem of learning disability is growing severely among the school children. The educationist, professionals and psychologists suggest some principles and methods to reduce the rate of learning disabled students. Most of them opined that, the alternative teaching and learning methods are the only means to reduce the learning disability. In view of this different methods of teaching and learning have been recommended for learning disabled. However, the drawback is that these methods deviate from the traditional set up of classroom where the students with learning disabilities are treated separately. Multiple Intelligences provides multiple ways to learn. Hence in the present article, the authors feel that Multiple Intelligence activity based teaching and learning may overcome this drawback and it will be one of the best alternative means for learning disabled in the traditional classroom itself.

Keywords: Multiple Intelligence, Learning, Disabilities, Teaching Methods.

INTRODUCTION

In Indian classrooms, students differ in terms of their academic progress. Most of them achieve high and at the same time some of the students have some learning problems. One of the major reasons for learning problems is Learning Disabilities (LDs). Learning disabilities refers to a variety of disorders that affect the acquisition, retention, understanding, organization or use of verbal and/or non verbal information. The most common academic skills affected by learning disabilities are reading, writing, and arithmetic which are technically known as dyslexia, dysgraphia and dyscalculia respectively. Some sources estimated that between 60% and 80% of children diagnosed with learning disabilities have reading as their only or main problem area. Sangeetha Sokhuja (2004) found that in India around 13-14% of all school children suffer from learning disorders.

Background of the Problem

The problem of Learning disability is growing severely among the school children. The educationist, professionals and psychologists are opined that some alternative teaching learning methods for students with LD is necessary. According to Poplin (1988), for success, persons with learning disabilities require specialized interventions in school to their individual strengths and needs by providing (a) Remedial Education, b) Intervention, and c) Compensatory Education. The previous researches like Bhattacharya (1985) found that learning through audio visual materials would cause more prolonged retention than the conventional method for learning disabilities in life science. Similarly, Dutta (1990) found that audio visual aids and techniques was the best method of preventive teaching measure for learning disabilities in the reasoning power of the students in geometry. Mohankumar and Rajaguru (2001) found that

Multimedia Instructional (MMI) Strategy was the best method for learning disabled in learning algebra concepts. Richard Sparks (2006) suggested that the focus of native and foreign language educators and researchers should be on developing effective methods for teaching foreign language to learning disabled.

Thus, the previous findings show the effectiveness of alternative teaching strategies for students with learning disabilities. However, there are some practical difficulties that exist in these methods. For instance, the previous findings suggested that technological approaches shall be the alternative one for students with LD, but it is extra burden for both students as well as teachers, as the students with LD must know the operating skills of technological devices like computer, TV and Radio etc. But it is not so in Multiple Intelligence Based Teaching, since multiple intelligence provides multiple ways to the learner for learning a concept. Further, it is possible that the teacher can deliver his/her instruction according to the interest of the students. This technique can help students and teachers to develop a deeper understanding of their abilities. It demonstrates to students how they can use their strengths and address their weaknesses. It boosts self-esteem and encourages risk-taking. It motivates students to learn more and to learn deeply.

According to Gardner's multiple intelligences, teaching and learning is possible in eight different ways like verbal or linguistic intelligence, logic-mathematical intelligence, musical-rhythmic intelligence, visual-spatial intelligence, bodily-kinesthetic intelligence, inter-personal intelligence, intra-personal intelligence and naturalistic intelligence. The research reviews indicate that multiple intelligence based teaching is an effective method. So far many studies have been conducted in multiple intelligence based teaching, but those studies are conducted for normal students and not for students with LDs. For instance, Blythe and Gardner (1990) proposed the process of implementation of multiple intelligence theory based instructional strategies for the schools. They stressed the urgency and importance of adopting this method in schools. Munro (1994)

conducted a study on a model of individual ways of learning and its implications for mathematics teaching. Canstanzo and Paxton (1999) pointed out that multiple intelligence theory could be used in the classroom as a guide to provide a great variety of way for students to learn and to demonstrate their learning. As learners and teachers work together, intelligence can emerge naturally through interviews, preference grids and assessments. Kuzniwski (2002) conducted an action research project which described a program for expanding multiple intelligences to increase reading comprehension in both English and Mathematics. Xavier and Annaraja (2007) found Multiple Intelligence Based Teaching (MIBT) was the best method for teaching mathematics for primary school students. Thus most of the studies have been conducted and found that multiple intelligence theory gave multiple ways for effective learning and teaching.

Relevance of Multiple Intelligences for Learning Disabilities

Multiple intelligences Based Teaching recognizes that each student possesses several intelligences, but they are not always well developed or effective. Teachers can activate the less-pronounced intelligences by diversifying the curriculum. Child-centred teaching, open-ended projects, cross-curricular activities, independent study, learning centre activities, multi-modal work, group projects, discovery learning and authentic assessment are some of the techniques which are possible in multiple intelligences based teaching because, the features of multiple intelligences teaching are the activities that promote critical thinking. In the verbal area, activities could include creating writing, literature circles, classroom library activities, independent reading, journaling and research projects. The mathematical intelligence can be developed with projects, scientific thinking, diagrams, problem-solving, manipulative and logic problems. Visual learners appreciate mapping, imagination, labelling, role-playing and drawing. Kinaesthetic learners benefit from drama, games, sports, movement, hands-on activities and experiments. Musical learners enjoy rhymes, song, instruments, sound and chants. Inter-personal learners love group work, discussions, role-playing, partner

activities and feedback. Intra-personal learners benefit from reflection, writing, learning centres, observation activities, autobiography, goal setting and meta-cognitive practices. The naturalist learner appreciates outdoor experiences, recording information in observation notebooks, creating natural scenes, observing the environment, and using tools such as magnifying glasses, binoculars, microscopes and telescopes. Thus each subtype of multiple intelligences has its own quality.

Further, multiple intelligences not only satisfy the needs of cognitive domain, but also they serve as an affective and psychomotor domains of human beings. LD is defined cognitively and it affects only cognitive skills like acquisition, retention, understanding, organization or use of verbal and/or non verbal information. In classes, teachers use conventional mode of instructional system which focuses only on cognitive skills, which are deficit among students with LDs. Hence it is difficult for them to achieve academically and develop learning skills. But it is possible and interesting for students with LDs when the teachers use interactive mode of instructional system in classes. Gardner's theory of multiple intelligences opens the gates for interactive mode of instructional system in classes and through which it is possible to deliver instructions based on all three domains like cognitive, affective and psychomotor. Hence in the present article, the author believes that Multiple Intelligence Activity Based Teaching can be the best alternative means for students with learning disabilities in the traditional classroom itself and prepared a teaching method through Gardner's multiple intelligences.

Method of Multiple Intelligences Activities Based Teaching (MIABT)

For teaching students with LDs using MIABT, teacher has to follow two different phases as follows:

Phase I: Identification of Multiple Intelligences

As in the first phase, the teacher has to identify the sub types of intelligences which dominate on a student with LDs. To do so, the teacher has to conduct a survey among the students with LDs, using standardized multiple intelligences tool. After collecting data, scoring should be done separately for each sub types of multiple intelligences and finally categorises the students in to each and every subtype of multiple intelligences based on the score obtained by the student. Like that we can get eight different types of group viz., verbal learner, visual learner, kinaesthetic learner and musical learner etc.

There is another type of identification of multiple intelligences among students with LDs. In this method, the teacher has to conduct same games to the students with LDs based on activities of multiple intelligences as suggested above. These games should be conducted continuously for one week at different times and every time the teacher should note the scores obtained by the students.

The obtained score can be entered in the weekly checklist sheet (Figure 1) regularly by the teacher and from that the teacher can identify what type of learner they are and categorize them accordingly like verbal learner, visual learner, bodily kinesthetic learner and musical intelligence learner etc.

Phase II: Preparation of Multiple Intelligences Activity Based Teaching (MIABT)

After identifying the type of learner, as in the second phase, the teacher can start teaching based on multiple intelligences. In this method, to the maximum, the

Multiple Intelligences Weekly Check List						
Name of the student:_____ Std._____ Sec._____ From_____ To _____						
Name of Multiple Intelligences	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Verbal / Linguistic						
Logical / mathematical						
Visual/Spatial						
Bodily kinesthetic						
Musical						
Inter-personal						
Intra-personal						
Naturalistic						

Figure 1. Multiple Intelligences Weekly Check List

teacher has to prepare eight different types of teaching methods for each and every units based on subtypes of multiple intelligences viz., verbal, visual, bodily kinaesthetic, musical, logical, inter-personal, intra-personol and naturalistic intelligences. To do that, the teacher has to prepare lesson plans, teaching learning activities and teaching leorning moterials for each ond every sub types of multiple intelligences separately for one concept or unit as recommended by Armstrong (1994), which is given below (Figure 2).

Based on these core activities, more number of MI activities can be generated to teoch o particular content. Finolly, the teacher con teach the concept using these materials to various groups of students based on multiple intelligences. Further the lesson can be taught through either activity of single intelligence or with the combination of oll the eight intelligences.

Conclusion

Multiple Intelligences call for a re-structuring of our schools to accommodate different modes of teaching-learning and inquiry with something other than deficit approaches. Theory of multiple intelligences offers a more holistic occounting of individuol potentiol and tolents. The Multiple Intelligence can be employed by making a conscious effort to include activities that incorporote various abilities or ways of knowing. Troditionolly, instructional methods tend to favour verbal-linguistic and logical-mathematical intelligences, and don't focus on the arts, self-awareness, communication and physical educotion. But using interoctive instructional system by employing role playing, musical performance, co-operative learning, reflection, visualization, story telling, etc., as well as assessment methods thot occount for the diversity of intelligences, the learning experiences can be richer and foster for all students, especially for students with leorning disobilities and hence it can be one of the best and effective olternative meons for students with LDs.

Intelligence	Instructional Strategies (examples)	Teaching Materials (examples)	Teaching Activities
Linguistic	Lectures, discussions, word games, starytelling, choral reading, journal writing.	Books, tape recorders, type writers, stamp sets, baoks an tape.	Read about it, write about it, talk about it, listen ta it.
Lagical Mathematical	Brain teasers, problem salving, science experiments, mental calculatian, number games, critical thinking.	Calculatars, math manipulative, science equipment, math games.	Quantify it, think critically about it, put it in a logical framework, experiment with it.
Spatial	Visual presentatians, art activities, imagination games, mind-mapping, metaphar, visualizatian.	Graphs, maps, videa, Laga sets, art materials, aptical illusians, cameras, picture library	See it, draw it, visualize it, calor it, mind-map it
Badily-Kinesthetic	Hands-an learning, drama, dance, sparts that teach, tactile activities, relaxatian exercises	Building taals, clay, sparts equipment, manipulative, tactile learning resaurces	Build it, act it aut, tauch it, get a "gut feeling" af it, dance it
Musical	Rhythmic learning's, rapping, using sangs that teach	Tape recorder, tape callectian, musical instruments	Sing it, rap it, listen ta it
Interpersanal	Caoperative learning, peer tutaring, cammunity invalvement, social gatherings, simulatians	Baard games, party supplies, praps far rale plays	Teach it, callabarate an it, interact with respect ta it
Intrapersanal	Individualized instructian, independent study, aptians in caurse af study, self-esteem building	Self-checking materials, jaurnals, materials far prajects	Connect it ta yaur personal life, make chaices with regard ta it, reflect an it
Naturalist	Nature study, ecalagical awareness, care af animals	Plants, animals, naturalists' taals (e.g., binaculars) gardening taals	Connect it ta living things and natural phenamena

Figure 2. Multiple Intelligence Activities, Materials and Strategies (Armstrong,1904)

References

[1]. **Armstrong. T. (1994),** *Multiple Intelligence in the Classroom,* Second Edition, Association for Supervision and Curriculum Development, Alexandrio.

[2]. **Bhattacharya (1985),** A Technological Approach to Preventive Teaching for Alleviatian of Learning Disabilities in life science, *Faurth Survey af Research in Educatian,* Vol I, PP.349.

[3]. **Blythe, T & Gardner, H.(1990)** A school for all intelligences, *Educational leadership,* 47(3), 33-37.

[4]. **Costanzo, M., & Paxton, D. (1999).** Multiple assessments for multiple intelligences. *"Focus on Basics,* 3" (A), 24-27.

[5]. **Dutta. A. (1990),** Learning Disabilities in the reasaning pawer af the students in Geametry diagnosis and prevention, *Fourth Survey of Research in Education,* Vol. I, PP.201.

[6]. **Gardner, H., & Hatch, T. (1989).** Multiple intelligences ga to school: Educatianal implicatians af the theary of multiple intelligences. *Educational Researcher,* 18(8), pp. 4-9.

[7]. **Kuzniewski. F (2002)** *Using Multiple intelligence to increase reading comprehension in English and Math,* ERIC Dacument Na. Ed420839.

[8]. **Mohankumar. A. and Rajaguru, S. (2001),** Multimedia Instructianal Strategy far learning disabled children, *Disability and Impairments,* Vol. 15, pp.133-136.

[9]. **Munro,J.(1994)** *Multiple Intelligence and Mathematics Teaching,* January (ERIC Document No. Ed372927).

[10]. **Poplin, M.S. (1988).** Holistic/constructivist principles of the teaching and learning pracesses: Implicatians for the field of learning disabilities. *Journal of Learning Disabilities,* 21, 401-416.

[11]. **Sangeetha Sakhuja (2004),** Education for all and Learning Disabilities in India, *Article No.9. Society for the study af Peace and Canflict.*

[12]. **Sparks, Richard (2006).** Is there 'Disability far Learning a Foreign language? *Journal af Learning Disabilities,* Val. 39, No.6, pp. 544-557.

[13]. **Xavier, P and Annaraja, P (2007).** Effectiveness of Multiple Intelligence Bosed Teaching (MIBT) in Teaching Mathematics for Primary School Students. *i-manager's Journal on Schoal Educatianal Technolagy,* Vol. 3, No. 2, pp.38-42.

[14]. http://www.thirteen.org/edoline/concept2class/mi

[15]. http://www.ipride.net/mi.htm

[16]. http://www.caakps.act.edu.au/mi.htm

[17]. http://www.gigglepatz.cam/mi8.htm

[18]. http://www.leeds.ac.uk/educal/documents/142801.htm

[19]. http://www.nipissingu.ca/faculty/mikew/resaurce/LDdefine.htm

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ABOUT THE AUTHORS

Dr. R. Ravi is working as a Assistant Professor in Education, Karunya University, Coimbatore. His area of specializations are Educational Technology, Educational Psychology and English Language Education. Currently he is working in the area of Multiple Intelligences and their applications for teaching and learning purposes. He is available at uniravi@rediffmail.com

Mr. P. Xavier is working as a Assistant Professor in Mathematics Education in the Department of Education, Karunya University, Coimbatore. He has published a few research articles in the area of mathematics education. He specialized in the areas like Mathematics Education and Information and Communication Technology. He can be reached at xavimath@cheerful.com